

## I. AMENDMENT TO THE DRAWINGS

The original application includes twenty four drawings. New FIGS. 25 to 28 were previously added to comply with the provisions of 37 CFR 1.83(a), which require the drawings to show every feature of the invention specified in the claims. New FIGS. 25, 27 & 28 were previously amended to be in full compliance with said provisions of 37 CFR 1.83(a). Fig. 25 is now being further amended as follows to address the objection of the Examiner set forth in the Advisory Action mailed on December 22, 2006:

The shading in the 3 dimensional configurations (sphere and cube devices) indicated in new FIG. 25 has been removed to allow for correct printing of drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are attached.

## **REMARKS**

Reconsideration of the above-identified application in view of the amendments to the drawings, and claims above and the remarks following is respectfully requested.

Claims 1-82 were originally in this application. Claims 1-82 were cancelled, and Claims 83-127 were added in the previous amendment dated May 27, 2005. Claims 97 & 106 were cancelled, and new claims 128 & 129 were added in the previous amendment dated June 10, 2006. Claim 105 was cancelled, and Claims 83, 84, 88, 96, 100, 109, 110, 111, 114, 115, 116, 126 and 127 were amended in the previous amendment dated November 9, 2006. Claims 83, 100, 111, 119, 126, 127 & 129 have now been amended. The changes associated with these amendments are indicated above.

## **DRAWINGS**

In the Advisory Action mailed on December 22, 2006, the Examiner objected to the drawings because the shading is dark and does not allow for correct printing of drawings. The Examiner recommended that the shading in 3 dimensional configurations is removed so that the drawing will be clear.

In order to address the Examiner's objection, **FIG. 25** has been amended as follows:

The shading in the 3 dimensional configurations (sphere and cube devices) indicated in new **FIG. 25** has been removed to allow for correct printing of drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are attached. The Applicant now believes that he has addressed all objections to the drawings. Accordingly, it is respectfully requested that the Examiner withdraw his objection to the drawings.

## **CLAIM REJECTION – 35 USC § 102**

In the Advisory Action mailed on December 22, 2006, the Examiner has withdrawn his rejections under 35 U.S.C. 251 to amendment of the specification related to items 2, 8, 10, 11, 9, 12 & 14. The Examiner, also, withdrew his objection to the term “playfield.”

The Advisory Action is silent on the status of the rejection of claims 83-96, 98-105, 107-129 under 35 U.S.C. 112, first paragraph. However, this rejection is related to the rejections under 35 U.S.C. 251, which were withdrawn. During a telephone conversation with the Examiner on January 4, 2007, he did confirm that the rejection of claims 83-96, 98-105, 107-129 under 35 U.S.C. 112, first paragraph has been withdrawn.

Similarly, the Advisory Action is silent on the status of the rejection of claims 83, 93, 96, 100, 111, 126 and 127 under 35 U.S.C. 112, second paragraph. However, the Applicant has addressed all the issues identified by the Examiner pursuant to 35 U.S.C. 112, second paragraph. During said January 4 telephone conversation, the Examiner confirmed that the rejection of claims 83, 93, 96, 100, 111, 126 and 127 under 35 U.S.C. 112, second paragraph has also been withdrawn.

The Advisory Action mailed on December 22, 2006, advised the Applicant that the Examiner did not withdraw the rejections of claims 83-96, 98-104 and 107-129 under 35 U.S.C. 102 and 103. The Examiner maintained that “it is inherent of the [Merlin] device that it would have to assign binary numbers to each of the keys so that it would map the light on and off positions and then respond to inputs from the user control logic. In addition, although the Examiner acknowledged that “Merlin’s chipset instruction set does not include Boolean operators,” he asserted that Merlin employs a look up table that “would be calculated using Boolean operations.” The Examiner further maintained that “the routing of binary numbers is

the same as changing the state of the display in response to the user selecting a certain key pad switch.”

### **Claims 83-95, 98-104, 107, 108 & 110-127**

As a first matter, the brief description provided in the Merlin instruction manual does not disclose any information whatsoever related to the assignment of binary numbers to playing positions, or the use of a look up table to “switch the states of the corresponding playing positions.”

As a second matter, even if we assume that such assignment of binary numbers to each key, and the use of a look up table are inherent in the Merlin device, Merlin does not anticipate independent claims 83, 100, 111, 126 & 127 as amended herein. To wit:

In substance, under the Examiner’s hypothesis of inherency, single binary digits (“1” for “on” & “0” for “off”) are assigned to each of the keys to provide an initial display for the Merlin indicators. Then upon the activation of a key pad switch, Merlin would employ a lookup table to change the states of the displays from “on” to “off,” or from “off” to “on” as explained in the Merlin instruction manual. Accordingly, pursuant to said hypothesis of inherency, there would be only one single set of binary numbers that represents the states of the Merlin’s indicators, and a lookup table in the following form:

<b>OLD STATE OF INDICATOR</b>	<b>NEW STATE OF INDICATOR</b>
<b>0 (off)</b>	<b>1 (on)</b>
<b>1 (on)</b>	<b>0 (off)</b>

The pertinent limitation in amended independent claims 83, 100, 111, 126 & 127 states:

**“routes [routing] at least two binary numbers respective to the playing position** activated by the player to each other” (emphasis added).

The above limitation of amended independent claims 83, 100, 111, 126 & 127 requires that at least two separate binary numbers associated with an activated playing position are routed to each other. Conversely, and pursuant to the hypothesis of inherency, Merlin can only have one binary number associated with a playing position, and that binary number would represent the status, or state of the indicator at the playing position. There is no second binary number either specified in the Merlin instruction manual, or inherent in Merlin, that could be routed to the binary number that represents the state of the indicator. In fact, any hypothesis that suggests that Merlin could employ two binary numbers from two different playing positions would be incorrect. The operation of Merlin, as described in its instruction manual, is based entirely on reversing the state of an indicator that is included in a fixed group configuration associated with (hard wired to) an activated key. There is no specified or inherent relationship whatsoever between the statuses of two indicators in the same group.

In the Advisory Action, the Examiner asserted that “the routing of binary numbers is the same as changing the state of the display in response to the user selecting a certain key pad switch.” It is respectfully submitted that there is a major distinction between routing two binary numbers (associated with an activated playing position) to each other for the purpose of generating a third binary number, and changing the state of the display from “on” to “off,” or from “off” to “on” in response to the user selecting a certain key pad switch. In the Merlin case it is very likely that the designer employed the hard wired instructions of the Texas Instrument TMS1100 micro-controller to link an input stimuli (the activation of a key) to an output effect (changing the state of an associated display). Under such hypothesis, there is no need to route two binary numbers to each other. Rather, the micro-controller (after determining a new state for

an indicator) would simply send a signal (single binary digit) to the output port associated with a display to switch it from “on” to “off,” or from “off” to “on.”

It should be noted that the routing of at least two binary numbers associated with a playing position to each other is one of the main differences between the inventions specified in claims 83, 100, 111, 126 & 127, and the Merlin device. The unique and novel concept of employing two sets of binary numbers (operating codes and color or display codes), wherein color or display codes are generated from the operating codes, enables the decoupling of displays from switches, and makes it feasible to vary the relationship between switches and displays using a data driven algorithm. As indicated in the Applicant’s response to the Office Action mailed on August 10, 2006, the Court made the following determination in its Memorandum of Decision and Order, dated March 5, 2002 (Exhibit “Y” attached to the Applicant’s response, dated November 9, 2006):

‘ - - -, the Court has considered the Defendants’ recitation of Merlin and its progeny solely as background information, particularly with regard to the distinction between previous generations of “hard-wired” games, in which a particular button has a predefined and unchanging effect on other buttons, and the Plaintiff’s innovation, which generates unique relations between buttons both between different games and indeed, within each individual game’ (emphasis added).

Accordingly, the Court has recognized that Merlin falls into the category of “hard-wired” games, and is limited by the fixed relationship between buttons and displays. This hard wired characterization of Merlin indicates that there is no need to employ two different sets of binary numbers (operating codes and color or display codes) to decouple displays from the control switches. Which mean that, in the Merlin device, there is no need to route at least two binary numbers to each other in order to generate color or display codes.

Because of the aforestated reasons, it is respectfully requested that the Examiner withdraw his rejection of independent claims 83, 100, 111, 126 & 127.

Claims 84-84, 98 & 99 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 83, from which these claims depend. Similarly, claims 101-104, 107, 108 & 110 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 100, from which these claims depend. Also, claims 112-125 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 111, from which these claims depend.

### **Claims 96, 128 & 129**

Claims 96, 128 & 129 were rejected under 35 U.S.C. 102(b), as being anticipated by Parker Brother's "Merlin."

Claim 96 includes the limitation of an algorithm that routes binary numbers assigned to the playing positions at the top, bottom, left, and right of the keypad switch activated by the player, to each other. It is respectfully submitted that the Merlin instruction manual does not disclose any such algorithm. Also this algorithm is not inherent in the Merlin device. Accordingly, claim 96 is patentably distinguishable over the cited reference of Merlin. In addition it is submitted that claim 96 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 83, from which this claim depends. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claim 96, under 35 U.S.C. 102(b) as being anticipated by Parker Brother's "Merlin."

Claim 128 includes the limitation of a geometric configuration that comprises a plurality of internal routes to route binary numbers to each other, and wherein the geometric configuration has two states such that the first state is associated with at least one route, and the second state is associated with at least one alternate route. It is respectfully submitted that the Merlin instruction manual does not disclose any such geometric configuration. Also this geometric configuration is

not inherent in the Merlin device. Accordingly, claim 128 is patentably distinguishable over the cited reference of Merlin. In addition it is submitted that claim 128 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as claim 96, from which this claim depends. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claim 128, under 35 U.S.C. 102(b) as being anticipated by Parker Brother's "Merlin."

Similarly, claim 129 includes the limitation of a geometric configuration that comprises a plurality of internal routes to route binary numbers to each other, and wherein the geometric configuration has two states such that the first state is associated with at least one route, and the second state is associated with at least one alternate route. It is respectfully submitted that the Merlin instruction manual does not disclose any such geometric configuration. Also this geometric configuration is not inherent in the Merlin device. Accordingly, claim 129 is patentably distinguishable over the cited reference of Merlin. In addition it is submitted that claim 129 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as claim 100, from which this claim depends. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claim 129, under 35 U.S.C. 102(b) as being anticipated by Parker Brother's "Merlin."

## **Claims 109**

Claim 109 was rejected under 35 U.S.C. 102(b), as being anticipated by Parker Brother's "Merlin."

Claim 109 recites an algorithm that employs dynamic routes to assign the second set of binary numbers to the indicators. Such dynamic route assignment, by definition, results in a variable relationship between buttons and indicators. The Merlin instruction manual clearly

indicates that the relationship between buttons and indicators is fixed. Accordingly, Merlin does not disclose such algorithm. Further, it is submitted that claim 109 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 100, from which this claim depends. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claim 109, under 35 U.S.C. 102(b) as being anticipated by Parker Brother's "Merlin."

Because of the aforesated, it is respectfully requested that the Examiner withdraw his rejection of claims 83-96, 98-104 and 107-129 under 35 U.S.C. 102(b).

### **CLAIM REJECTION – 35 USC § 103**

In the Advisory Action mailed on December 22, 2006, the Examiner maintained his rejection of claims 86, 87, 89, 92, 94, 111-125, under 35 U.S.C. 103(a).

#### **Claims 89, 121 & 122**

The Merlin reference clearly states that the "on" indication consists of a blinking light. By definition, an image is static, and as such the plurality of images produced by Merlin does not include a plurality of images as maintained by the Examiner. In addition, it is submitted that claim 89 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 100, from which this claim depends. Similarly, it is submitted that claims 121 & 122 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 111, from which these claims depend. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claims 89, 121 & 122, under 35 U.S.C. 103(a) as being obvious and unpatentable over Parker Brother's "Merlin."

## **Claims 87, 111 & 119**

The Applicant agrees with the Examiner that at the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use any display or input device to implement the '037 invention. However, as discussed above, independent claim 111 is patently distinguishable over the cited reference of Merlin, at least because Merlin does not include any structure that routes at least two binary numbers respective to the playing position activated by the player to each other. In addition, it is submitted that claim 87 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 83, from which this claim depends. Also, it is submitted that claim 119 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 111, from which this claim depends. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claims 87, 111 & 119, under 35 U.S.C. 103(a), as being obvious and unpatentable over Parker Brother's "Merlin."

## **Claims 112 - 116 & 123-125**

It is not clear why the Examiner rejected claims 112-116, 123, 124 & 125 under 35 U.S.C. 103(a) as being obvious and unpatentable over Parker Brother's "Merlin."

## **Claims 86, 117, 118 & 120**

Claims 86, 117, 118 and 120 were rejected under 35 U.S.C. 103(a) as being obvious and unpatentable over Parker Brother's "Merlin" in view of Sinclair, U.S. patent No. 4,513,973. The Examiner argued that Sinclair teaches an electronic game in which light emitting means are provided using multi-colored light emitting diodes. The Examiner concluded that "it would have been obvious to use multi-colored light emitting diodes in Merlin game so as to provide different challenges with different colors and to be aesthetically appealing."

There is no merit to the Examiner's argument. Sinclair discloses a game device, wherein the microprocessor is programmed to provide moves representing those made by an opponent player. A plurality of push buttons is provided so that buttons be depressed during game play to cause illumination of secret or hidden light sources. A player plays against the computer for lighting segments on the board associated with pairs of switches. Different colored lights are provided to differentiate between moves made by the player, and moves made by the computer.

Clearly, Sinclair does not disclose a puzzle device either in the context of the '037 patent, or the Magic Square Game. There are many games and toys known in the art, and which employ multi-colored light emitting means. The fact that a game uses a multi-color light emitting diode does not make it obvious to one skilled in the art to simply place multi-color light emitting diodes in the Merlin game "so as to provide different challenges with different colors and to be aesthetically appealing." In a similar vein, it would not have been obvious for one skilled in the art of television to convert a black and white TV to a color TV because of the existence of a colored photograph.

The disclosure in the Merlin reference teaches that each button always affects a group of lights such that when the button is pressed, the lights are reversed (from on to off, and from off to on). This teaching does not work when you introduce more than 2 visual indications or colors at a playing position. For example, if there are three colors per indicator, what would be the game rules to transition from "color 1" to "color 2," from "color 2" to "color 3," or from "color 1" to "color 3," etc. There are no such rules that are either specified in the Merlin instruction manual, or inherent in Merlin operation. Further, Sinclair does not include any disclosure that teaches one skilled in the art how to convert the two state operation of the Magic Square Game into a game that employs 3 or more states per indicator.

The '037 patent teaches a novel concept of employing two sets of binary numbers, such that the first set is manipulated by the push buttons to generate the second set, which in turn activates the indicators. To increase the number of colors, one simply needs to increase the length of the binary number, i.e., the number of bits used. The preferred embodiment of the '037 patent illustrates two examples, a five color device, and a nine color device, where the main difference is the use of 4 bits binary numbers versus 8 bits binary numbers. The '037 patent, also teaches that one skilled in the art can vary the number of colors playable by a device by changing the assignment of the second set of binary numbers to pre-defined colors, or to a dark indication. None of this teaching is included in Sinclair.

Accordingly, by virtue of the above, it is respectfully submitted that claims 86, 117, 118 and 120 are patently distinguishable over the cited reference of Merlin. Also, it is submitted that claim 86 is patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 83, from which this claim depends. Similarly, it is submitted that claims 117, 118 and 120 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 111, from which these claims depend. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claims 86, 117, 118 & 120, under 35 U.S.C. 103(a), as being obvious and unpatentable over Parker Brother's "Merlin" in view of Sinclair.

## Claims 92 & 94

Claims 92 and 94 were rejected under 35 U.S.C. 103(a) as being obvious and unpatentable over Parker Brother's "Merlin" in view of Skowronski et al., U.S. patent No. 4,809,979. The Examiner argued that Skowronski teaches an electronic puzzle device where means are provided to vary the difficulty level of play in a plurality of games. The Examiner

concluded that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the difficulty level in the game of Merlin so that players are challenged during game play.”

There is no merit to the Examiner’s argument. Skowronski discloses a puzzle with a cube housing that is solved by rotating the faces into a horizontal plane. The cube device does not employ any push buttons, but rather uses an algorithm that is activated by sequential rotation movements of the cube housing in order to change a display one face of the cube. Skowronski, also, discloses that the microprocessor can be programmed for various levels of difficulty by using different algorithms. Clearly, the teaching of Skowronski is not applicable to Merlin, which uses push buttons rather than rotation to activate the indicators.

Because Merlin employs a fixed relationship between buttons and indicators, it is very difficult to vary the difficulty level of play without decoupling the buttons from the indicators. There is no disclosure in either the Merlin instruction manual, or in Skowronski that teaches one skilled in the art how to provide a more difficult game in Merlin.

Accordingly, by virtue of the above, it is respectfully submitted that claims 92 and 94 are patently distinguishable over the cited reference of Merlin. Also, it is submitted that claims 92 and 94 are patentably distinguishable over the cited reference of Merlin for at least the same reasons as independent claim 83, from which these claims depend. Accordingly, it is respectfully requested that the Examiner withdraw his rejection of claims 92 and 94, under 35 U.S.C. 103(a), as being obvious and unpatentable over Parker Brother’s “Merlin” in view of Skowronski et al.

Because of the aforesated, it is respectfully requested that the Examiner withdraw his rejection of Claims 86, 87, 89, 92, 94, 111-125, under 35 U.S.C. 103(a).

## CONCLUSION

The Applicant has addressed all of the main issues raised in the Advisory Action mailed on December 22, 2006. Accordingly, it is respectfully submitted that this reissue application is ready for issue.



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